ENGLISH

Matrox solutions for medical imaging

Matrox **MED Series**

MED2mp-DVI • MED3mp-DVI • MED4mp-DVI • MED5mp-DVI • MED5mp

User Guide

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www.matrox.com/graphics

matrox™
Graphics for Professionals

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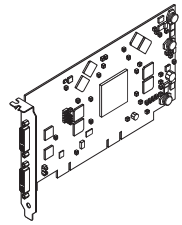
Overview

Providing high image quality, sharp grayscale and color output, your Matrox MED Series card is designed to meet the needs of the medical imaging market. This product can be used for a range of medical applications, including PACS (Picture Archiving and Communication Systems), X-ray imaging, MRI (Magnetic Resonance Imaging), and digital radiography.

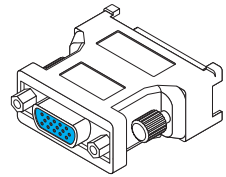
MED Series cards support resolutions (in either portrait or landscape orientations) up to 1920 × 1200 for the MED2mp, 2048 × 1536 for the MED3mp, 2560 × 1600 for the MED4mp, and 2560 × 2048 for the MED5mp.

Hardware supplied

MED2mp-DVI, MED3mp-DVI, MED4mp-DVI, and MED5mp-DVI



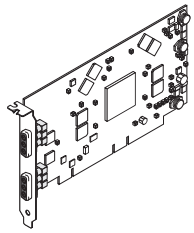
Matrox card (PCI card shown)



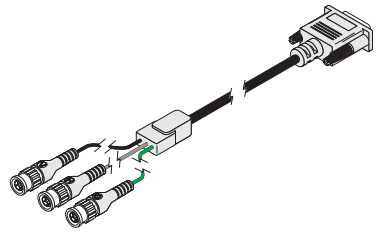
DVI-to-HD15 adapter *

* For more information, see page 8.

MED5mp (3W3)



Matrox card (PCI)



2 monitor cables *

* For more information, see page 11.

Software supplied

- **Matrox PowerDesk** – to use your Matrox product
- **Other software** – see the CD-ROM *Readme* file

Installation overview

Note: If your Matrox product is already partially or fully installed on your computer, some or all the installation information in this guide may not apply to you. However, this information may be useful if you need to reinstall your Matrox product.

To install your Matrox product:

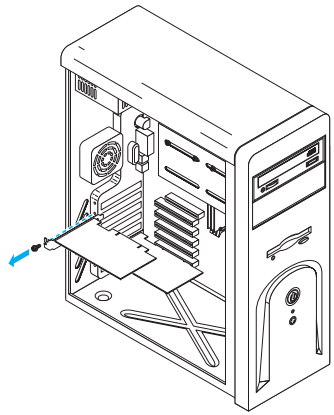
1. Install the Matrox card – see "Hardware installation", page 5.
2. Connect your monitors – see "Connection setup", page 8.
3. Install the software – see "Software setup", page 12.
4. Set up the software – see "Display setup", page 13.

Hardware installation

This section describes how to install your Matrox card. If your Matrox card is already installed in your computer, skip to "Connection setup", page 8. For information specific to your computer, like how to remove its cover, see your system manual.

WARNING: To avoid personal injury, turn off your computer, unplug it, and then wait for it to cool before you touch any of its internal parts. Also, static electricity can severely damage electronic parts. Before touching any electronic parts, drain static electricity from your body (for example, by touching the metal frame of your computer). When handling a card, carefully hold it by its edges and avoid touching its circuitry.

1 Open your computer and remove your existing graphics card *



a Using **Add/Remove Programs** in the Windows **Control Panel**, remove any currently installed display drivers. Restart your computer for the changes to take effect.

After your computer restarts, you're prompted to install drivers for the new graphics hardware detected. Click **Cancel**.

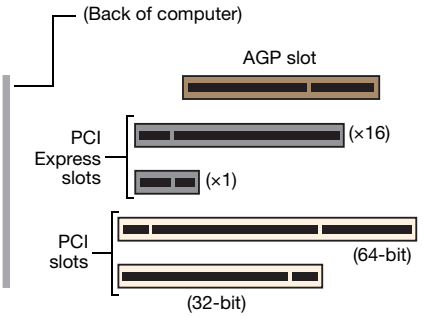
b Turn off your computer and all peripherals such as your monitor or printer.

c Open the computer and remove your existing graphics card. (If graphics hardware is built into the motherboard of your computer, this graphics hardware should automatically disable itself after your Matrox card is installed. For more information, see your system manual.)

* With multi-display mode, you may be able to use your existing graphics card. For more information, see Windows online help under "Multiple Display Support".

2 Choose an expansion slot

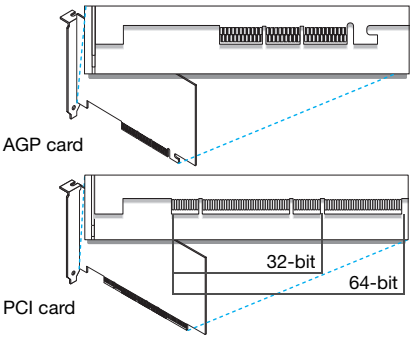
Most computers have different types of expansion slots. Choose an AGP or PCI (not *PCI Express*) slot, depending on the type of Matrox card you have. If you have a PCI card, your card supports both 64-bit and 32-bit PCI slots. Your system manual should identify the location of each type of expansion slot in your computer.



Note: If you're using a PCI graphics card in a 64-bit compatible slot, your choice of PCI slot may affect your card or system performance. For more information, see your computer manual.

WARNING: Inserting your Matrox card into the wrong type of slot could damage your card, your computer, or both.

If you have a PCI card and you're using a 32-bit PCI slot, only part of your card's edge connector (the part closest to the bracket) should be inserted into the PCI slot.

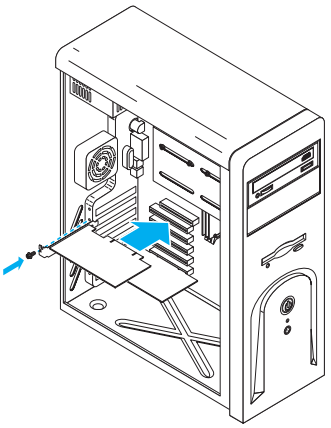


3 Insert your Matrox card

a Position your Matrox card over the expansion slot you've chosen.

b Push the card in firmly and evenly until it's fully seated in the slot.

c Secure the bracket of your Matrox card to the computer frame.



Your Matrox card is now installed. ***Before restarting your computer,*** connect your monitor or monitors (see "Connection setup", page 8). ***After connecting,*** restart your computer and install your Matrox software (see "Software setup", page 12).

WARNING: If your computer doesn't restart after your Matrox card is installed, turn off your computer to avoid damaging electronic parts. For troubleshooting information, see page 18.

Connection setup

This section describes how to connect monitors to different models of Matrox MED Series cards.

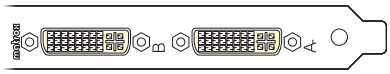
WARNING: Don't change monitor connections while your computer is turned on. While your computer is turned on, it may be using monitor settings that are specific to the current monitor connections. ***Some*** devices may be permanently damaged if incorrect settings are used.

Note: Whenever you change your connection setup, make sure you're using the correct connectors and that all connectors are properly fastened.

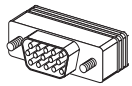
Note: The left-to-right order of your displays isn't dependent on your connection setup and, through Matrox PowerDesk software, you can re-order your displays to match your Windows desktop. For more information, see Matrox PowerDesk help.

MED-DVI connection setup

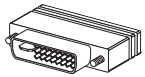
The following describes how to connect monitors to a Matrox MED Series card that has ***DVI*** connectors. For information on how to connect your MED4mp-DVI product, see "MED4mp-DVI connection setup", page 10.



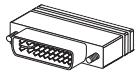
Note: To connect a *digital* monitor (a monitor that uses digital input, usually a flat panel monitor) to your Matrox product, your monitor must have a DVI connector.



HD-15 connector (analog)



DVI connector (digital)



DVI connector (analog/digital)

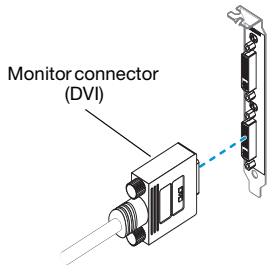
Some monitors with DVI connectors support both digital and analog input. If you're using one of these monitors with your Matrox product, make sure it's configured to use the correct type of input. For more information, see your monitor documentation.

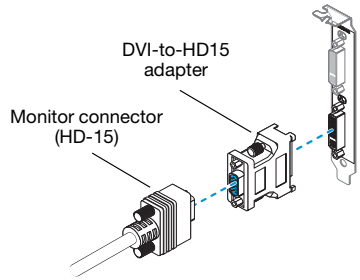
1 Connect the first monitor

Connect your preferred monitor to the main connector (**A**) on your Matrox card.

If your monitor has a DVI connector, connect it directly to the main connector of your card.

If your monitor has an HD-15 connector, use the DVI-to-HD15 adapter included with your product to connect your monitor to the main connector.

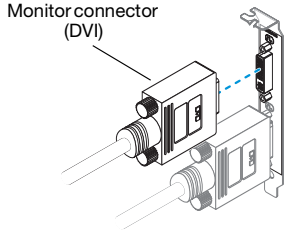


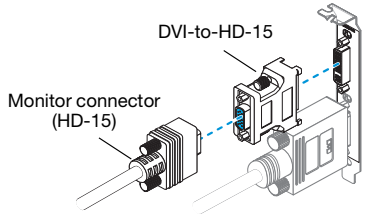


2 Connect the second monitor

If your second monitor has a DVI connector, connect it directly to the secondary connector (**B**) of your card.

If your monitor has an HD-15 connector, use a DVI-to-HD15 adapter to connect your monitor to the secondary connector. If you need a ***second*** DVI-to-HD15 adapter, contact your computer vendor.

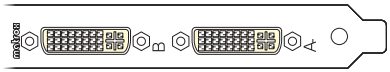




Note: Whenever you restart your computer, make sure your monitors are already turned on. Otherwise, the software may not be able to properly detect your monitors.

MED4mp-DVI connection setup

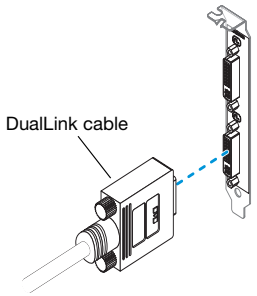
The following describes how to connect monitors to a Matrox MED4mp-DVI card. This card is designed for DualLink monitors.



Note: The main connector (**A**) of your Matrox product is designed for use with a DualLink monitor. The secondary connector (**B**) is for an optional analog monitor.

1 Connect your DualLink monitor

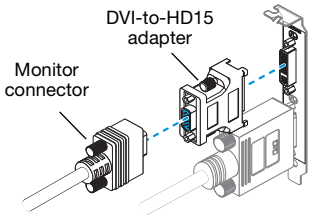
Using the cable included with your DualLink monitor, connect this monitor to the main connector (**A**) of your Matrox card.



2 Connect an analog monitor (optional)

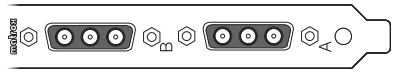
If your analog monitor has a DVI connector, connect it directly to the secondary connector (**B**) of your card.

If your analog monitor has an HD-15 connector, use the DVI-to-HD15 adapter included with your Matrox product to connect your monitor to the secondary connector.



MED5mp connection setup

The following describes how to connect grayscale monitors to a Matrox MED5mp card. This card is designed for grayscale monitors with BNC (Bayonet Neill-Concelman) connectors.

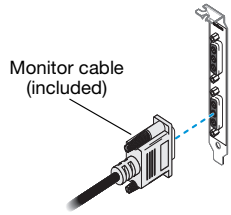


WARNING: Depending on your Matrox product, the output signal is configured to use 50 or 75 ohms. Before connecting a monitor to your Matrox card, make sure they're compatible. Otherwise, ***some*** monitors may be permanently damaged. For more information, see your monitor documentation.

1 Connect the first monitor

Connect one of the monitor cables included with your Matrox product to the main connector (**A**) on your Matrox card.

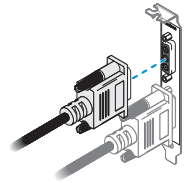
Connect the BNC connectors on your monitor cable to your preferred monitor.



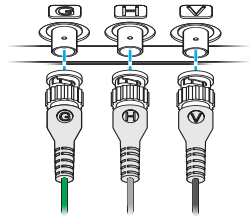
2 Connect the second monitor

Connect your other monitor cable to the secondary connector (**B**) on your Matrox card.

Connect the BNC connectors on your monitor cable to your second monitor.



Note: When connecting the BNC connectors on your monitor cable to your monitors, make sure the Green (**G**), Horizontal Sync (**H** – gray wire), and Vertical Sync (**V** – black wire) connections are firmly in place and plugged into the correct input.



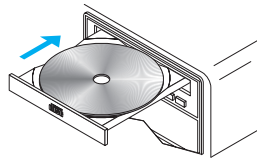
Software setup

Note: This guide has references that are specific to the Matrox installation CD-ROM. If your Matrox product wasn't packaged by Matrox (for example, if it was included with your computer), your product may not include this CD-ROM.

If you don't have this CD-ROM, certain references in this guide may not reflect the software you have. For more information, see other software documentation provided by your system vendor.

This section describes how to install Matrox software for ***Windows 2000/XP or NT 4.0***.

You may need administrator rights to install certain software. For more information, see Windows documentation.



1 Install display driver

If you're using Windows 2000/XP, it detects new hardware when you restart. If Matrox display drivers haven't been previously installed, Windows prompts you to install a display driver. Follow the on-screen instructions. (The Matrox Windows 2000/XP display driver is in the *Win2kXP* folder of your Matrox installation CD-ROM.)

2 Install optional software

After your computer restarts, you may install additional software from the Matrox Installation CD-ROM. You can simply browse the Installation CD-ROM for the program you want to install, then you can run the installation program in that folder.

3 Set up your display software

See "Display setup", page 13.

Display setup

Windows 2000/XP or NT 4.0 – Your Matrox display driver includes Matrox PowerDesk software. This software helps you get the most out of your Matrox card. This section has important information on how to configure your display settings using Matrox PowerDesk software.

Accessing PowerDesk

Many display controls are available through Matrox PowerDesk. To access Matrox PowerDesk:

- **Windows 2000/XP –** Right-click your Windows desktop background, then click **Properties → Settings → Advanced → PowerDesk → Matrox PowerDesk-HF**.
- **Windows NT 4.0 –** Click **Start → Settings → Control Panel → Matrox Display Properties** (double-click).

Also, to quickly access PowerDesk features, double-click the **Matrox PowerDesk** (Windows 2000/XP) or **Matrox QuickDesk** (Windows NT 4.0) icon ( ) on your Windows taskbar. To see the PowerDesk icon in Windows XP, you may need to click the **Show hidden icons** button ( ) on your Windows taskbar.

Note: Multi-display mode is supported under Windows 2000/XP and NT 4.0. For more information on multi-display mode, see Windows 2000/XP online help under "Multiple Display support".

Monitor setup

Before changing your display resolution, color palette, or other Matrox PowerDesk settings, make sure correct software monitor settings are selected. If you have a Plug-and-Play (DDC) monitor, correct settings are usually automatically selected. The following explains how to make sure your monitor settings are okay.

WARNING: If you're using BNC connectors with a Plug-and-Play monitor, the Plug-and-Play feature of your monitor can't be used.

WARNING: If incorrect software monitor settings are applied, ***some*** monitors can be permanently damaged. For more information, see your monitor manual.

Windows 2000/XP – If you have a Plug-and-Play (DDC) monitor, Windows should automatically use correct settings for your monitor. To make sure the correct monitor is selected in Windows:

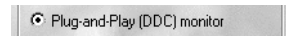
1. Right-click your Windows desktop background, then click **Properties → Settings → Advanced → Monitor**. If you're using a multi-display desktop (see "Multi-display setup", page 16), select a display before clicking **Advanced**.
2. If the monitor name listed isn't **Plug-and-Play** and doesn't match your monitor, click **Properties → Driver → Update driver**. Follow the on-screen instructions.
3. If you're using a multi-display desktop (see "Multi-display setup", page 16), repeat steps 1–2 for each display in your Windows desktop.

For more information on Windows monitor settings, see Windows documentation.

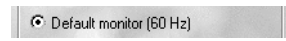
If you want to customize your Windows monitor settings:

1. From the main interface of PowerDesk (see "Accessing PowerDesk", page 13), click **Monitor Adjustments**.
2. Select the appropriate device.
3. Click **Adjust visible area and refresh rate**.

Windows NT 4.0 –

1. Access the PowerDesk **Monitor** property sheet (see "Accessing PowerDesk", page 13).
2. **If you have a Plug-and-Play monitor:**
   

   Make sure the **Plug-and-Play (DDC) monitor** button is selected. If so, the Matrox display driver ***automatically*** uses correct settings for your monitor. If not, click this button, then click **Apply**.

   If you don't have a Plug-and-Play monitor:
   

   See if the **Default monitor (60 Hz)** button is selected. If so, use the Matrox monitor selection method. For more information on Matrox monitor selection, see Matrox PowerDesk online documentation.
3. If you're using a multi-display desktop (see "Multi-display setup", page 16), repeat steps 1–2 for each display in your Windows desktop.

Portrait monitor setup

Most standard monitors are *landscape* monitors – that is, they're wider than tall. *Portrait* monitors are taller than wide. Different models of portrait monitors may have different types of support for this orientation.

Some portrait monitors support portrait mode by rotating the monitor signal and reporting support for portrait display resolutions to the graphics hardware. For most monitors, the display resolutions supported are automatically detected and used by the Matrox display driver.

Note: A monitor using BNC connectors can't report its capabilities to the display driver.

If your monitor supports ***both*** portrait and landscape orientations, it may have one connector for landscape mode and one for portrait mode. Which connector you use determines whether portrait or landscape mode is used. For more information, see your monitor documentation. Before changing your connection setup, always shut down your computer.

Some portrait monitors are merely landscape monitors physically rotated 90 degrees. These monitors don't rotate the monitor signal and don't report support for portrait resolutions. In this case, use Matrox software to rotate the display to match the monitor orientation. To rotate your display with Matrox software:

Windows 2000/XP –

1. From the main interface of PowerDesk (see "Accessing PowerDesk", page 13), click **Monitor Adjustments**.
2. Select the appropriate monitor, then click **Adjust orientation**.
3. If you're using multiple displays in *stretched* mode and you want to re-orient your displays as if they were one display, enable **Rotate as a single display**.
4. Using the arrow buttons, re-orient your display, then click **OK**.

Windows NT 4.0 –

1. Access the PowerDesk **Rotate** property sheet (see "Accessing PowerDesk", page 13).
2. If you're using multiple displays and you want to re-orient your displays as if they were one display, enable **Rotate as one display**.
3. Using the arrow buttons, re-orient your display, then click **OK**.

Multi-display setup

To set up multi-display mode:

Windows 2000/XP –

1. From the main interface of PowerDesk (see "Accessing PowerDesk", page 13), click **Multi-Display Setup**.
2. Select the number of displays and the multi-display setup you want to use.
3. Click **OK** or **Apply** for your changes to take effect. You may be prompted to restart your computer.

Windows NT 4.0 –

1. Access the PowerDesk **Settings** property sheet (see "Accessing PowerDesk", page 13).
2. If you want to use multi-display mode, click **Multi-Display Desktop** ( ).
3. Change the setup of your multi-display desktop by moving the **Desktop area** slider, then click **OK**.

Note: In multi-display mode under Windows NT 4.0, the same display settings (resolution and grayscale settings) are used for each display.

Grayscale setup

Windows 2000/XP or NT 4.0 – To select the grayscale setup for your displays:

1. **Windows 2000/XP –** From the main interface of PowerDesk (see "Accessing PowerDesk", page 13), click **Grayscale Setup**.

   Windows NT 4.0 – Access the PowerDesk **Gray Palette** property sheet (see "Accessing PowerDesk", page 13).
2. Select the grayscale setup you want. For more information, see Matrox PowerDesk help.
3. Click **OK** or **Apply** for your changes to take effect. You may be prompted to restart your computer.

Note: With your Matrox *MED-DVI* product, DICOM-compliant grayscale output is intended primarily for *digital* monitors. For *analog* monitors, the accuracy and consistency of the grayscale output is dependent on your monitor and its calibration.

More PowerDesk information

For more information on Matrox PowerDesk:

Windows 2000/XP – For PowerDesk online help, click **Help → PowerDesk guide** from the main interface of PowerDesk (see "Accessing PowerDesk", page 13).

Window NT 4.0 – For context-sensitive help where available, click the " " icon in the title bar, then click the item you want help on. Right-click a help topic for a pop-up menu that lets you print or copy it. (Some help topics are only available through context-sensitive help.)

- Access the Matrox PowerDesk **Information** property sheet (see "Accessing PowerDesk", page 13).
- Click the Matrox QuickDesk icon ( ) on your Windows taskbar, then click **Help → PowerDesk Guide** or **Help → View Readme File**.

Troubleshooting

Basic procedures

This section explains basic procedures that are referred to by some troubleshooting items in this guide.

W Restarting in VGA mode

Note: If information isn't properly displayed ***before*** Windows starts or while Windows is using VGA mode, you may need a special software update for the BIOS of your Matrox card. For more information, contact the vendor of your Matrox product.

Windows 2000/XP or NT 4.0 – What follows is information on how to restart your computer in *VGA mode*.

1. Restart your computer.

   - **Windows 2000/XP** – Click **Start → Shut Down → Restart → OK***. (* Depending on your version and configuration of Windows, this part of the step may not be necessary.)
   - **Windows NT 4.0** – Click **Start → Shut Down → Restart your computer → Yes**.

   If your primary monitor is unusable, see your system manual for information on how to restart your computer using a hardware control.

2. **Windows 2000/XP** – ***Before*** Windows starts, press [F8] for the Windows startup menu to appear. (If [F8] doesn't work, instead try pressing and holding [Ctrl] before Windows starts.)
3. Select "VGA mode", then press [Enter].

Main troubleshooting

This section addresses possible problems that could prevent you from using your computer.

Problem **Computer doesn't display information or boot after Matrox card is installed**

Cause Your Matrox card may not be properly installed.

Solution Make sure your Matrox card is properly installed. Specifically, make sure the card is firmly inserted in its expansion slot and that all connections to it are firmly in place. For more information, see "Hardware installation", page 5.

Cause There may be unsupported graphics hardware in your computer. (For Matrox *multi-display mode* in Windows NT, all graphics cards in your computer must be Matrox cards supported by the display driver.)

Solution If an unsupported graphics card is plugged into an expansion slot, remove it.

Solution If graphics hardware is built into your computer motherboard, your system may not have automatically disabled it when you inserted your Matrox card. Check your system manual for instructions on how to disable your computer's built-in graphics hardware.

Cause Your computer BIOS (Basic Input/Output System) settings may be incorrect.

Solution Change your BIOS settings, specifically the *AGP aperture size*. For more information on your computer BIOS, see your system manual.

Cause Your computer BIOS may not be up to date. For more information on your computer BIOS, see your system manual.

Solution Reinstall your previous graphics card and, if possible, update your computer BIOS. This can usually be done with software from the manufacturer of your computer. Contact your system vendor or manufacturer to get a BIOS update for your computer.

To get the correct BIOS update, you may need to know the serial number your computer displays when it restarts. (This number is usually in the lower-left corner of the display.)

Cause The BIOS of your Matrox card may need to be updated or restored.

Solution **Windows 2000/XP or NT 4.0 – For advanced users** – If you have another VGA-compatible graphics card (PCI), you can try resetting the BIOS of your Matrox card.

1. Turn off your computer and insert the other graphics card into an expansion slot. For more information on expansion slots, see "Choose an expansion slot", page 6.

2 Plug your monitor into the other graphics card and restart your computer.

> **Note:** Make sure your computer uses the other graphics card to control your primary display. The graphics card that controls your primary display is the one that first displays information when you restart your computer. (A DualHead-supporting graphics card may display this startup information on both of its displays at the same time.)
>
> Your computer BIOS (Basic Input/Output System) and the slot type (AGP, PCI, or PCIe – see "Choose an expansion slot", page 6) of each graphics card help determine which graphics card controls your primary display.
>
> To control which graphics card is used for your primary display, you may be able to change the configuration of your computer BIOS. For information on how to change your computer BIOS settings, see your system manual.

3 Insert your Matrox installation CD-ROM.

4 Click **Start → Run**, type *d:\SysUtils*. You will need to use the **PBIOSWin** program to update the BIOS of your Matrox card. For more information on how to use this program, see the *Readme* file in the *Sysutils* folder.

5 Turn off your computer, remove the other graphics card, then plug your monitor into your Matrox card.

6 Restart your computer.

Cause The power supply of your computer may not be powerful enough for all the devices on your computer.

Solution **For advanced users** – Remove unnecessary devices from your computer (for example, an unused network card or an extra CD-ROM drive). For more information, see your system manual or the documentation for each device.

Solution You may be able to upgrade the power supply of your computer. We recommend a power supply of 300 Watts or more. For more information, contact your computer vendor.

Problem Wrong color balance, screen image off-center, or no picture at all

Cause Your monitor video controls may be improperly set.

Solution Adjust your monitor controls (brightness, contrast, and so on). For more information, see your monitor manual.

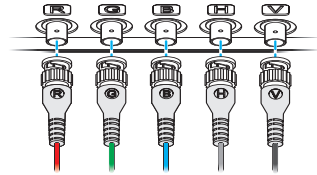
Cause Your monitor may not be properly connected.

Solution Make sure you're using the correct connectors (see "Connection setup", page 8) and that all connectors are properly fastened.

Solution Make sure the monitor power cable is firmly in place.

Solution Make sure the connection to the back of the monitor is firmly in place.

If your monitor uses BNC input, make sure the Red (**R**), Green (**G**), Blue (**B**), Horizontal Sync (**HSYNC** – white or gray wire), and Vertical Sync (**VSYNC** – black wire) connections are firmly in place and plugged into the correct input.



BNC connectors

Note: For most analog grayscale monitors using BNC connectors, not all BNC connectors are needed. In most cases, only the Green (**G**), Horizontal Sync (**H**), and Vertical Sync (**V**) connectors are used.

Cause If your monitor uses BNC input, one or more connection settings may be incorrect.

Solution Make sure the input signal supported by your monitor is compatible with the output signal of your Matrox card. For most devices, the signals are configured to use 75 ohms. For some devices (for example, some analog grayscale monitors or some Matrox MED5mp cards), the signals are configured to use 50 ohms. For more information, see your product specifications.

Cause If display problems occur after the startup screen of your operating system, your software monitor settings may be incorrect.

Solution Make sure correct software monitor settings are selected.

If your primary display is still usable, see "Monitor setup", page 13. Otherwise, see the next troubleshooting item.

Solution **Windows 2000/XP** – Make sure you're not using inappropriate monitor setting customizations:

1. Double-click the PowerDesk icon ( ) on your Windows taskbar to access the PowerDesk main interface. To see the PowerDesk icon in Windows XP, you may need to click the **Show hidden icons** button ( ) on your Windows taskbar.
2. Click **Monitor Adjustments**.
3. Select the appropriate device.
4. Click **Adjust visible area and refresh rate → Restore defaults**.

Cause You may be using a grayscale setup that doesn't conform to the DICOM standard.

Solution Make sure you're using either a fixed linear or a fixed non-linear gray palette. For more information, see Matrox PowerDesk help.

Cause Your monitor may not be properly calibrated.

Solution Make sure your monitor is calibrated for the gray palette you're using.

Problem After the startup screen, or after display settings are changed, the screen image is garbled or unusable

(blank screen, rolling or overlapping screen images)

Cause The Matrox display driver may be trying to use settings your monitor doesn't support. This can happen if a monitor was never selected in the software and the display resolution was changed to one your monitor doesn't support, or if the monitor connected to your computer was changed without changing it in the software.

WARNING: If incorrect software monitor settings are applied, ***some*** monitors can be permanently damaged. For more information, see your monitor manual.

Solution

Windows 2000/XP –

1. If your primary display is unusable, restart your computer in VGA mode (see "Restarting in VGA mode", page 18).
2. Right-click the Windows desktop background, then click **Properties** → **Settings**.
3. Move the **Screen area** (Windows 2000) or **Screen resolution** (Windows XP) slider down to its lowest setting, then click **OK**.
4. Restart your computer normally.
5. Make sure the correct monitor is selected in Windows (see "Monitor setup", page 13).
6. Restore your original display settings (see steps 2 and 3).

Windows NT 4.0 –

1. If your primary display is unusable, restart your computer in VGA mode (see "Restarting in VGA mode", page 18).
2. Right-click the Windows desktop background, then click **Properties** → **Settings**.

   Windows may prompt you that the display settings are incorrect for the current mode; click **OK** to continue.
3. Move the **Desktop area** slider down to its lowest setting, then click **OK**.

4 Restart your computer normally.

5 Select a monitor with the Matrox PowerDesk **Monitor** property sheet, then adjust your display settings. For more information, see the Matrox PowerDesk online documentation.

Cause Files on your system may have been deleted or corrupted.

Solution Remove, then restore Matrox software:

> **Note:** Before removing software, make sure you have all the necessary files to reinstall software that may still be needed.

> **Note:** **Windows 2000/XP** – You may need administrator rights to remove certain software. For more information, see Windows documentation.

Windows 2000/XP or NT 4.0 –

1 If your primary display is unusable, restart your computer in VGA mode (see "Restarting in VGA mode", page 18).

2 To remove Matrox software:

- Windows 2000/XP – Click **Start → Settings*** **→ Control Panel → Add/Remove Programs** (double-click*) **→ Matrox PowerDesk-HF and Driver → Change/Remove → Yes.** (* Depending on your version and configuration of Windows, this part of the step may not be necessary.)
- Windows NT 4.0 – Click **Settings → Control Panel → Add/Remove Programs** (double-click) **→ Install/Uninstall → Matrox Graphics Software (remove only) → Add/Remove → Yes**.

3 Restart your computer for changes to take effect. After your computer has restarted, install the latest display driver for your Matrox card. You may also need to reinstall other Matrox software.

Extra troubleshooting

The following are extra troubleshooting items related to cards.

Problem Windows XP 'Screen resolution' slider is disabled

Cause W

While using 256 shades of gray, your Matrox product supports only 8-bit display modes. With these display modes, Windows XP disables the **Screen resolution** slider.

Solution

To change the screen resolution of your displays:

1. Right-click your Windows desktop background, then click **Properties → Settings**.
2. If you're using a multi-display desktop, select a display.
3. Click **Advanced → Adapter → List all modes**, select a resolution and refresh rate for your display, then click **OK → OK → OK**.

Solution

If possible, use 1024 shades of gray. For more information, see Matrox PowerDesk help.

Problem W Icons and other standard Windows graphics appear incorrectly

Cause

You may be using 256 shades of gray with a **Fixed linear gray palette**.

Solution

If possible, use 256 shades of gray with a **Fixed non-linear gray palette** or use 1024 shades of gray. For more information, see Matrox PowerDesk help.

Cause W

Windows XP – While using 256 shades of gray, your Matrox product supports only 8-bit display modes. With these display modes, Windows uses only standard Windows colors (16 basic colors plus 4 reserved colors) for icons and other standard Windows graphics.

Solution

Don't use the Windows XP themes. To change your Windows appearance, right-click your Windows desktop background, click **Properties → Themes**, select **Windows Classic** under **Theme**, then click **OK**.

Problem Can't select one or more display resolutions supported by your monitor

Cause **Windows 2000/XP or NT 4.0** – Windows may be disabling display resolutions that it can't detect as supported by your monitor.

Solution Install the latest monitor software from your monitor manufacturer.

Solution Change Windows monitor settings:

1. Right-click your Windows desktop background, then click **Properties → Settings**.
2. If you're using a multi-display desktop, select a display.
3. Click **Advanced → Monitor**, disable **Hide modes that this monitor cannot display**, then click **OK → OK**.

Problem Can't use Windows, Windows reports a configuration error, and/or can't install or uninstall Matrox display driver

Note: **Windows 2000/XP or NT 4.0** – You may need administrator rights to install certain software. For more information, see Windows documentation.

Cause The problem may be specific to the motherboard in your computer.

Solution There may be a software update available for your motherboard. To find out what motherboard model your computer is using, see your system manual. For more information, contact the maker of your motherboard or computer. Many motherboard or computer manufacturers have software updates available on their Web site.

Cause Files on your system may have been deleted or corrupted.

Solution Remove, then restore Matrox software. For more information, see page 23.

Problem Monitor settings aren't automatically detected

WARNING: If incorrect software monitor settings are used, your display may become unusable and ***some*** monitors can be permanently damaged. For more information, see your monitor manual.

Note: **Windows 2000/XP or NT 4.0** – To check if your monitor settings are properly selected:

W

1 **Windows 2000/XP** – Right-click your Windows desktop background, then click **Properties → Settings → Advanced → Monitor**. If you're using multi-display mode, select a display before clicking **Advanced**.

Windows NT 4.0 – Access the Matrox PowerDesk **Monitor** property sheet (see "Accessing PowerDesk", page 13). If you're using multi-display mode, select a display number.

2 If you see the name of your monitor or "Plug-and-Play", your monitor settings are properly selected.

If you see the wrong monitor name or **Default monitor**, your monitor settings aren't properly selected.

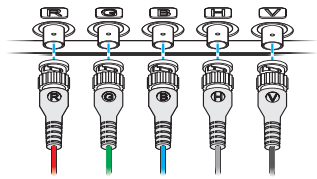
Cause Your monitor may not be Plug-and-Play. Most new monitors are Plug-and-Play but many older ones aren't. Software can't automatically detect settings for monitors that aren't Plug-and-Play.

Solution Manually select your monitor settings in the software. For more information, see "Monitor setup", page 13.

Cause If a monitor was changed or added while Windows was running, the new monitor may not be detected by the software.

Solution Restart your computer. If your monitor is a Plug-and-Play (DDC) monitor, it should be automatically detected by the software.

Cause You may be using BNC connectors with a Plug-and-Play monitor. The Plug-and-Play feature of a monitor can't be used with BNC connectors.



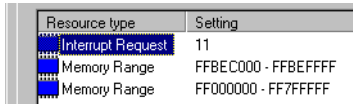
BNC connectors

Problem 3D and video programs don't work

Cause Your computer may not have given an IRQ (interrupt request) to your Matrox card or may have given one used by another device in your computer. This may be because your computer's "Plug-and-Play" feature is turned off.

W **Windows 2000/XP** – To check the display adapter's IRQ:

1. Click **Start** → **Settings*** → **Control Panel** → **Performance and Maintenance*** → **System** (double-click*) → **Hardware** → **Device Manager**. (* Depending on your version and configuration of Windows, this part of the step may not be necessary.)
2. Click the plus sign to the left of the **Display adapters**. An "**X**" through an icon means the hardware has been disabled. A circled exclamation point through the icon means the hardware has a problem.
3. Double-click the name of your Matrox display adapter to open a properties dialog box. The type of problem is displayed in the **General** tab → **Device status** area. Check also the **Resources** tab → **Resource type** list for an **Interrupt Request**.



Solution Change settings in your computer BIOS setup utility.

If your computer has the options of enabling Plug-and-Play detection, or assigning an IRQ to a VGA adapter, make sure they're enabled. If your computer doesn't have these options, you may be able to manually assign an IRQ to your Matrox card using the BIOS setup utility.

For more information on the BIOS setup utility of your computer, see your system manual or contact your system manufacturer.

Cause Your computer's other BIOS settings may be incorrect.

Solution Reset your computer BIOS settings to the factory defaults using your computer's built-in BIOS setup utility. The factory defaults are usually the "safest" settings. Check your system manual for more information.

Problem W — Using multiple displays under Windows 2000/XP or NT 4.0, program doesn't work with main graphics card

Cause Your main graphics card may not be controlling your primary display. The graphics card that controls your primary display is the one that first displays information when you restart your computer.

A program that doesn't recognize multiple displays may not work with a graphics card unless it's controlling your primary display.

Your computer BIOS (Basic Input/Output System) and the slot type (AGP, PCI, or PCIe – see "Choose an expansion slot", page 6) of each graphics card help determine which graphics card controls your primary display.

Solution If you're having problems with a program that can be moved on your Windows desktop, run this program on your primary display. Make sure the program window doesn't overlap any other display. If the program doesn't work with the graphics card controlling your primary display, or you want your main graphics card to control your primary display, see the other solutions.

Solution Change the configuration of your computer BIOS so that the slot type of your main graphics card has priority for becoming the primary display. For information on how to change your computer BIOS settings, see your system manual.

If your computer BIOS doesn't let you select which slot type has priority for becoming the primary display, a BIOS update may be available to let you do this. (The BIOS of most computers can be updated with software.) For a possible BIOS update for your computer, contact your system vendor.

Solution If there's a graphics controller built into the motherboard of your computer, by changing your computer BIOS settings, you may be able to change which device controls your primary display. For more information, see your system manual.

Solution If you don't need to use the graphics card that's controlling your primary display, remove it from your computer. If your primary display is controlled by the motherboard of your computer, see your system manual for information on how to disable this graphics controller.

Cause The program you're using may not work properly with systems using more than one display at a time.

Solution An update may be available for the program you're using. This update may fix problems this program has with multi-display systems. For more information, contact the software distributor for the program you're using.

Solution If you're using multiple displays in *independent* mode, try using *stretched* mode instead. Programs that don't work in independent mode may work in stretched mode. For more information, see Matrox PowerDesk help.

Solution W

Windows 2000/XP – For advanced users – To use a program that doesn't support multi-display systems, you can disable all displays other than your primary display:

1. Double-click the PowerDesk icon ( ) on your Windows taskbar to access the PowerDesk main interface. To see the PowerDesk icon in Windows XP, you may need to click the **Show hidden icons** button ( ) on your Windows taskbar.
2. Click **Multi-Display Setup**. Make sure you're using **1 display**.
3. Click **Start → Settings*** **→ Control Panel → Performance and Maintenance*** **→ System** (double-click*) **→ Hardware → Device Manager**. (* Depending on your version and configuration of Windows, this part of the step may not be necessary.)
4. Click the plus sign to the left of the **Display adapters**.
5. For each display adapter, ***except*** for the one controlling your primary display, right-click the name of a display adapter, then click **Disable → Yes**.

> **Note:** Your primary display can't be disabled.

6. Restart your computer for changes to take effect.

> **Note:** To restore display adapters, repeat steps 3–5, but click **Enable** in step 5.

Problem W Not all graphics cards in the computer are fully supported (Software doesn't work with a certain graphics card, or another graphics card doesn't work at all)

Cause

If you have different models of graphics cards in your computer, your Matrox display driver may not support all the graphics cards in your computer.

Solution

Under Windows 2000/XP, a display driver may support one or more graphics cards. If a display driver doesn't support a certain card, a different display driver must be used for that card. Software that depends on a certain display driver may not work with a graphics card that's not using the same display driver.

> **Note:** If your Matrox product was provided by the manufacturer of your computer, check the Web site of that manufacturer for the latest display driver. A display driver provided by the manufacturer of your computer is more likely to be tested with your computer model.

Under Windows NT 4.0, only one display driver at a time may be used. To use more than one graphics card, the display driver must support all the graphics cards installed. If an unsupported graphics card is installed in your computer, that card either isn't used or your computer restarts in VGA mode (single-display, 640 × 480 resolution, 16 colors).

Solution If a graphics card isn't supported, you may need to remove it. If there's graphics hardware built into the motherboard of your computer that's not supported by your software, see your system manual for information on how to disable this graphics hardware.

Cause **Windows 2000/XP** – If the Windows method for display driver installation was used (instead of running the setup program included with your Matrox display driver), the driver may not be installed for all the graphics cards it supports.

Solution Run the setup program included with the Matrox display driver. The setup program automatically installs the display driver for each Matrox graphics card it supports.

Problem W — Screen image defects appear, program doesn't run properly, or Windows doesn't work properly

(example: mouse pointer not drawn properly)

Cause Some programs may not work properly with some Matrox acceleration.

Solution Disable specific types of software acceleration:

Windows 2000/XP –

1. Double-click the PowerDesk icon ( ) on your Windows taskbar to access the PowerDesk main interface. To see the PowerDesk icon in Windows XP, you may need to click the **Show hidden icons** button ( ) on your Windows taskbar.
2. Click **Help → Troubleshooting settings**.
3. Disable one or more features. For more information, see Matrox PowerDesk help.
4. Click **OK** or **Apply** for your changes to take effect. (Depending on the feature you disabled, you may have to restart your computer for the changes to take effect.)

Windows NT 4.0 –

1. Access the Matrox PowerDesk **Performance** property sheet (see "Accessing PowerDesk", page 13).
2. Clear one or more check boxes. For more information, see Matrox PowerDesk help.
3. Click **OK → Yes** to accept the changes. (Depending on the feature you disabled, you may have to restart your computer for the changes to take effect.)

Solution Disable Windows effects:

Windows 2000 –

1. Right-click your Windows desktop background, then click **Properties → Effects**.
2. Disable one or more features under **Visual effects**.

Windows XP –

1. Right-click your Windows desktop background, then click **Properties** → **Appearance** → **Effects**.
2. Disable one or more features.

Solution If possible, update your Matrox display driver. For more information, contact the computer or monitor vendor who provided your Matrox card.

Solution **Windows 2000/XP** – Disable Matrox hardware acceleration:

1. Right click your Windows desktop background, then click **Properties** → **Settings** → **Advanced** → **Troubleshooting** (or **Troubleshoot**).
2. Move the **Hardware acceleration** slider to **None**.
3. Click **OK** → **OK** to accept the changes.

Problem Program window or dialog box doesn't appear on screen

Cause Another window or dialog box may be covering the window or dialog box you want to see.

Solution Move, close, or minimize any window or dialog box that may be covering the window or dialog box you want to see.

Cause If you're using multi-display mode, the program window or dialog box may be in a display or on a monitor that's unusable. (For example, your monitor may not be properly connected or configured.)

Solution Make sure all the displays and monitors you want to use are usable. For more information, see other troubleshooting items in this guide.

Cause The software may be using a display you didn't intend to use or the software may be configured to use more displays than the actual number of monitors you have. (For example, you may be in DualHead Multi-Display mode but you only have one monitor.)

Solution Disable the display:

Windows* 2000/XP –

(* Only while using multiple displays in *independent* mode. For more information, see PowerDesk help.)

1. Right-click your Windows desktop background, then click **Properties** → **Settings**.
2. Select the display you want to disable, then clear the **Extend my Windows desktop onto this monitor** check box.
3. Click **OK** or **Apply** for your changes to take effect.

Cause W The program window or dialog box may be somewhere off-screen.

Solution If the program window you want to see is named on the Windows taskbar, right-click on it and select **Maximize**. (If you click **Restore** the program window goes back to its previous position. To fix this problem, see the other solutions.)

Solution Manually move the program window or dialog box:

1. Press [Alt]+[Space].
2. If you see a pop-up menu, click **Move**. If you don't see a pop-up menu, press [M] (for **Move**).
3. Press one of the arrow keys once and move your mouse pointer to where you want the window or dialog box to appear, then click. The program window or dialog box should appear where you clicked.

Solution **Windows 2000/XP –**

1. Double-click the PowerDesk icon ( ) on your Windows taskbar to access the PowerDesk main interface. To see the PowerDesk icon in Windows XP, you may need to click the **Show hidden icons** button ( ) on your Windows taskbar.
2. Click **Desktop Management**.
3. Enable one or more of the following features:
   - **Open program windows**
   - **Center dialog boxes and message boxes**
4. Choose where you want the program window or dialog box to appear.

For more information, see Matrox PowerDesk help.

Windows NT 4.0 –

1. Access the Matrox PowerDesk **PowerDesk** property sheet (see "Accessing PowerDesk", page 13).
2. Enable one or more of the following features:
   - **Open program windows in display**
   - **Center dialog boxes**
3. Choose where you want the program window or dialog box to appear.

For more information, see Matrox PowerDesk help.

Problem Display on digital monitor appears blurry or uses only a portion of the screen

Cause You may be using a lower display resolution than what your digital monitor supports. If your monitor supports display scaling, the image on your screen may appear blurry. If display scaling isn't supported, the display may use only a portion of your screen.

Solution Select the highest display resolution available. This generally results in better image quality. (While using two digital monitors at the same time, certain limitations may apply. For more information, see page 36.)

Product information

Specifications

	MED2mp-DVI	MED3mp-DVI	MED4mp-DVI
Key features	Grayscale support · Hardware pivot · Portrait monitor support · Multi-display support in *independent* and *stretched* modes		
Graphics chip	Matrox 512-bit GPU		
Memory type	DDR (Double Data Rate) SDRAM		
Memory	256 MB	256 MB	256 MB
Main RAMDAC	400 MHz	400 MHz	400 MHz
Secondary RAMDAC	400 MHz	400 MHz	400 MHz
Card type	AGP 2× and 4× compatible ***or*** PCI* 64-bit, 66 MHz	PCI* 64-bit, 66 MHz	PCI* 64-bit, 66 MHz
Form factor	ATX	ATX	ATX
Maximum resolution (main display)	1920 × 1200 (digital/analog)	2048 × 1536 (digital) 1920 × 1200 (analog)	2560 × 1600 (DualLink digital)
Maximum resolution (secondary display)	1920 × 1200 (digital/analog)	2048 × 1536 (digital) 1920 × 1200 (analog)	1920 × 1200 (analog)
Connectors	2× DVI-I	2× DVI-I	2× DVI-I
Certifications†	Class A: FCC, CE, CSA, VCCI		

* Also compatible with 32-bit, 33 MHz PCI slots and with 3.3- or 5-Volt PCI slots.
† For more information, see page 45.

	MED5mp-DVI	MED5mp
Key features	Grayscale support · Hardware pivot · Portrait monitor support · Multi-display support in *independent* and *stretched* modes	
Graphics chip	Matrox 512-bit GPU	
Memory type	DDR (Double Data Rate) SDRAM	
Memory	256 MB	256 MB
Main RAMDAC	400 MHz	550 MHz
Secondary RAMDAC	400 MHz	550 MHz
Card type	PCI* 64-bit, 66 MHz	PCI* 64-bit, 66 MHz
Form factor	ATX	ATX
Maximum resolution (main display)	2560 × 2048 (digital) 1920 × 1200 (analog)	2560 × 2048 (analog)
Maximum resolution (secondary display)	2560 × 2048 (digital) 1920 × 1200 (analog)	2560 × 2048 (analog)
Connectors	2× DVI-I	2× 3W3
Certifications†	Class A: FCC, CE, CSA, VCCI	

* Also compatible with 32-bit, 33 MHz PCI slots and with 3.3- or 5-Volt PCI slots.
† For more information, see page 45.

Notes

- For a list of supported monitor and partner solutions, see www.matroxmed.com.
- Certain Matrox MED Series products don't support Windows NT 4.0. For more information, contact your Matrox representative.
- Your Matrox card is 100% VGA compatible and supports all VESA standards: VBE 2.0 (Super VGA modes), DPMS (energy saving), and DDC-2B (Plug-and-Play monitor).
- Your Matrox product supports DualHead features. *DualHead* features control 2 displays at a time.
- 3D acceleration is only available with a 16- or 32-bit color palette.
- The display resolutions and refresh rates available depend on your Matrox graphics card, display driver, software monitor settings, and monitor. For information on the capabilities of your monitor, see your monitor documentation.
- While using 2 displays at a time, each monitor has its own monitor settings (refresh rates).
- While using 2 displays at a time ***both*** at the highest display resolution, certain display limitations may apply.

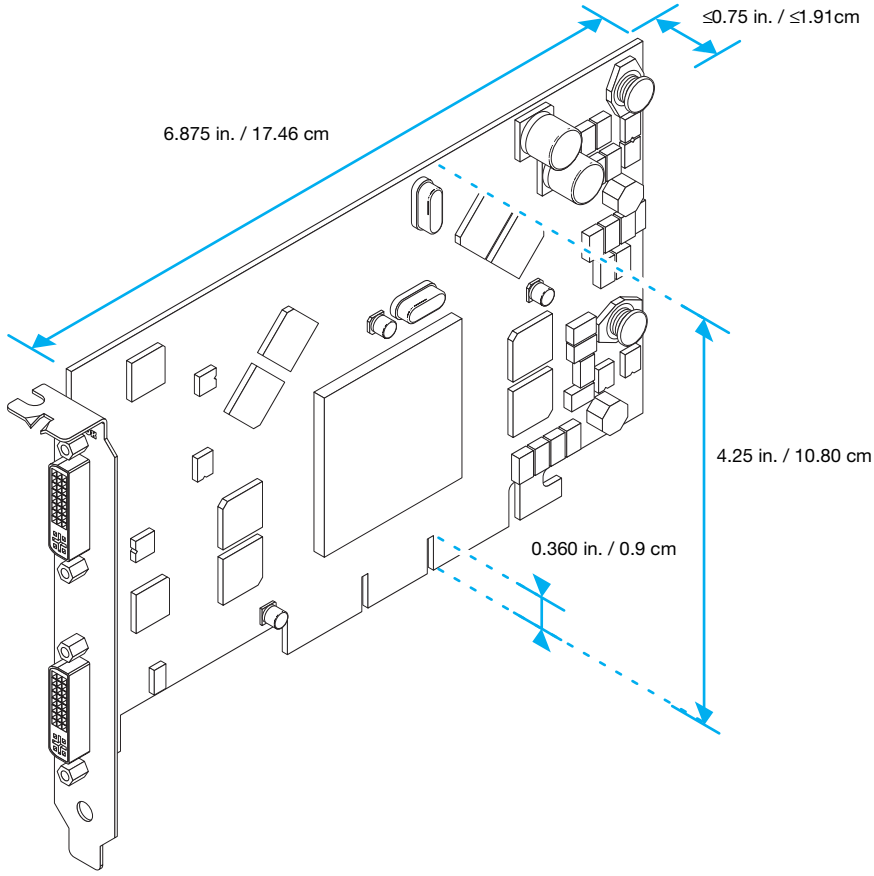
- If you're using 2 digital monitors at the same time, your Matrox hardware uses the same display resolution for both your monitors. If you select different resolutions for your displays, one of your displays may use only a portion of the screen (the rest of the screen will be black). To avoid having only a portion of the screen used, we recommend you select the highest display resolution available. The highest display resolution available is the highest resolution supported by both monitors. If one of your monitors supports a higher resolution, it may use display scaling to fill the entire screen. For more information on what your monitors support, see their documentation.
- If you're using 2 digital monitors at a time with your Matrox product and you want to use different orientations for each of them, make sure you're using *independent* mode and then use Matrox PowerDesk software to rotate one of your displays.
- If you're using BNC connectors with a Plug-and-Play monitor, the Plug-and-Play feature of your monitor can't be used.

Digital monitor information

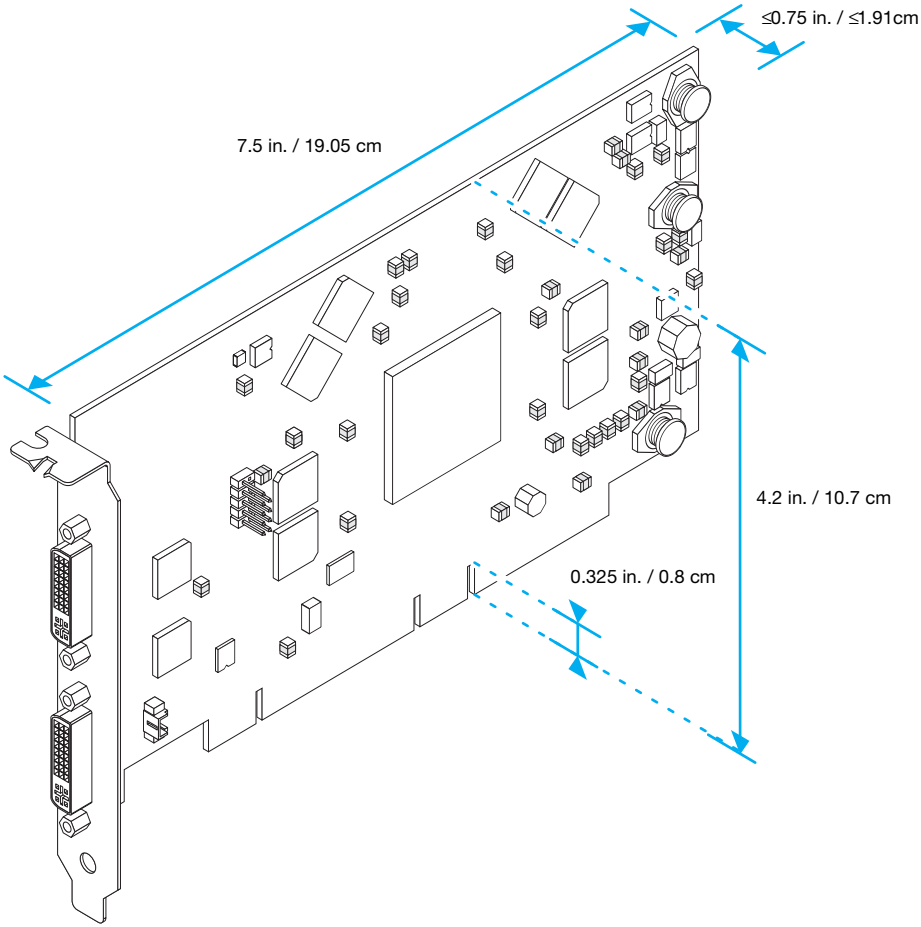
- TMDS (Transition Minimized Differential Signaling) encoding*
- DDWG (Digital Display Working Group) compliant DVI connector
- EDID (Extended Display Identification Data) 1.2, 1.3 (without the extended data block), and 2.0 support

* While using 2 digital monitors at the same time, certain limitations may apply. For more information, see page 35.

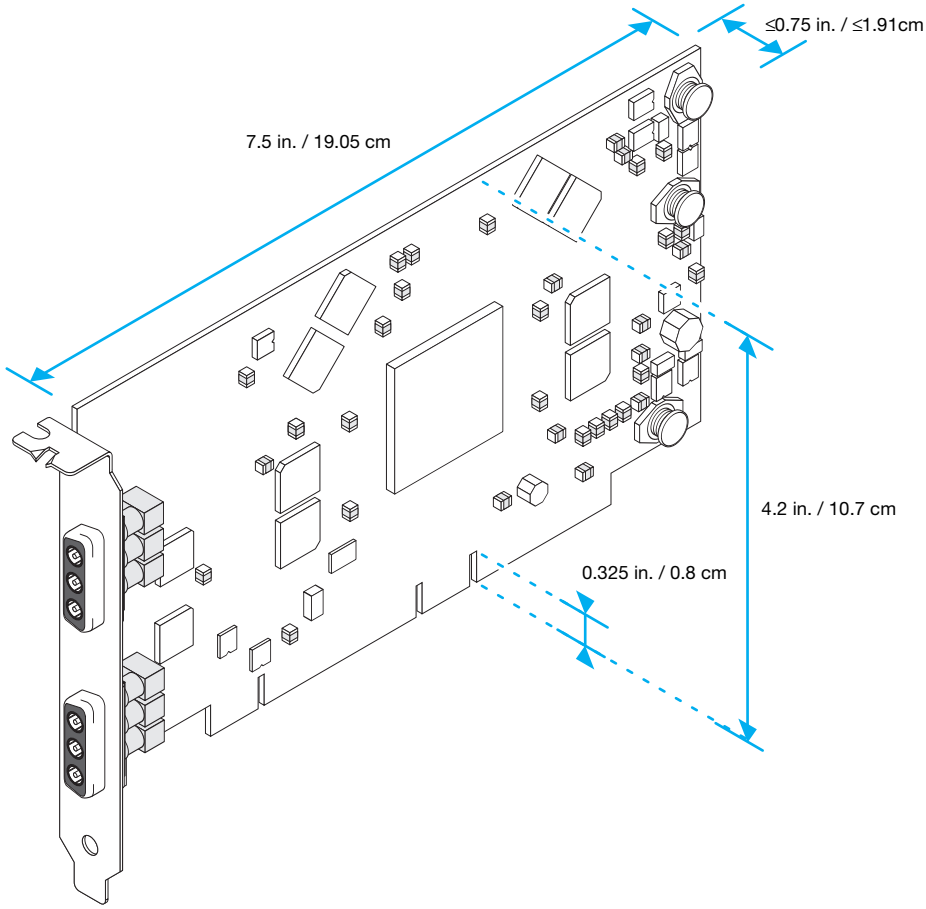
Maximum card dimensions – AGP card



Maximum card dimensions – PCI card



Maximum card dimensions – PCI card (3W3)



More information

We provide additional documentation in help files, *Readme* files, and Adobe Acrobat PDF (Portable Document Format) files. To view or print PDF files, use the **Adobe Reader** program, which you can install from the "Matrox Installation" CD-ROM. This guide is available on the CD-ROM as a PDF file (*Guide\MED Guide.pdf*).

Note: Be sure to check for any last-minute release notes at the end of this manual and in the Matrox CD-ROM *Readme* file.

Customer support

Matrox MED products are available for purchase through Matrox partners. To speak with a Matrox sales representative, call **1-800-786-9836** in North America, or see the Matrox medical imaging Web site for a list of our worldwide sales offices.

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For technical support, contact your dealer. This is the quickest and most effective method of technical assistance. Your dealer is familiar with your complete system. In the case of hardware warranty assistance, the product must be returned to the dealer, who will return it to Matrox.

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   - **h.** software;
   - **i.** other causes that do not relate to a product defect;
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1. Verify that your Matrox product was installed and configured according to the information in its accompanying documentation.
2. Read the "Troubleshooting" information included with your Matrox product and the documentation provided by your dealer to see if you can solve the problem yourself.
3. If you are still experiencing difficulties, please contact your dealer where you purchased your Matrox product.

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4. The Software functions substantially as described in the documentation.

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USA

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Remark for the Matrox hardware products supported by this guide This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING Changes or modifications to this unit not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment. The use of shielded cables for connection of the monitor to the card is required to meet FCC requirements.

CANADA

(English) Industry Canada Compliance Statement

Remark for the Matrox hardware products supported by this guide These digital apparatus does not exceed the Class A limits for radio noise emission from digital devices set out in the Radio Interference Regulation of Industry Canada.

(Français) Conformité avec les exigences du ministère de l'Industrie Canada

Remarque sur les produits matériels Matrox couverts par ce guide Ce present appareil numérique n'émet aucun bruit radioélectrique dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada.

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(Français) Informations aux utilisateurs Européens – Déclaration de conformité

Remarque sur les produits matériels Matrox couverts par ce guide Ces unités sont conformes à la directive communautaire 89/336/EEC pour les unités numériques de classe A. Les tests effectués ont prouvé qu'elles sont conformes aux normes EN55022/CISPR22 et EN55024/CISPR24. Le fonctionnement de ces produits dans un environnement résidentiel peut causer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre les mesures appropriées. Pour respecter les impératifs communautaires, les câbles de connexion entre le moniteur ou autres périphériques et la carte doivent être blindés. Ces produits ont été testés dans un système hôte typique compatible classe A. On suppose qu'ils présenteront la même compatibilité dans tout système compatible classe A.

(Deutsch) Information für europäische Anwender – Konformitätserklärung

Anmerkung für die Matrox Hardware-Produktunterstützung durch dieses Handbuch Diese Geräte entsprechen EC Direktive 89/336/EEC für ein digitales Gerät Klasse A. Sie wurden getestet und entsprechen demnach EN55022/CISPR22 und EN55024/CISPR24. In einer Wohnumgebung können diese Produkte Funkinterferenzen erzeugen, und der Benutzer kann genötigt sein, entsprechende Maßnahmen zu ergreifen. Um EG-Anforderungen zu entsprechen, müssen zum Anschließen des Monitors und anderer Peripheriegeräte an die Karte abgeschirmte Kabel verwendet werden. Diese Produkt wurden in einem typischen, der Klasse A entsprechenden, Host-System getestet. Es wird davon ausgegangen, daß diese Produkte auch in jedem Klasse A entsprechenden System entsprechend funktionieren.

(Italiano) Informazioni per gli utenti europei – Dichiarazione di conformità

Nota per i prodotti hardware Matrox supportati da questa guida Questi dispositivi sono conformi alla direttiva CEE 89/336/EEC relativamente ai dispositivi digitali di Classe A. Sono stati provati e sono risultati conformi alle norme EN55022/CISPR22 e EN55024/CISPR24. In un ambiente domestico, questi prodotti possono causare radiointerferenze, nel qual caso all'utente potrebbe venire richiesto di prendere le misure adeguate. Per soddisfare i requisiti CEE, il monitor e le altre periferiche vanno collegati alla scheda grafica con cavi schermati. Questi prodotti sono stati provati in un tipico sistema host conforme alla classe A. Inoltre, si dà per scontato che questi prodotti acquisiranno la conformità in qualsiasi sistema conforme alla classe A.

(Español) Información para usuarios europeos – Declaración de conformidad

Observación referente a los productos de hardware de Matrox apoyados por este manual Estos dispositivos cumplen con la directiva de la CE 89/336/EEC para dispositivos digitales de Clase A. Dichos dispositivos han sido sometidos a prueba y se ha comprobado que cumplen con las normas EN55022/CISPR22 y EN55024/CISPR24. En entornos residenciales, estos productos pueden causar interferencias en las comunicaciones por radio; en tal caso el usuario deberá adoptar las medidas adecuadas. Para satisfacer las disposiciones de la CE, deberán utilizarse cables apantallados para conectar el monitor y demás periféricos a la tarjeta. Estos productos han sido sometidos a prueba en un típico sistema anfitrión que responde a los requisitos de la clase A. Se supone que estos productos cumplirán también con las normas en cualquier sistema que responda a los requisitos de la clase A.

EUROPE

(English) European user's information – Directive on Waste Electrical and Electronic Equipment (WEEE)

Please refer to the Matrox Web site (www.matrox.com/environment/weee) for recycling information.

(Français) Informations aux utilisateurs Européens – Règlementation des déchets d'équipements électriques et électroniques (DEEE)

Se référer au site Web de Matrox (www.matrox.com/environment/weee) pour l'information concernant le recyclage.

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